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EXAMINER

WHITMORE, STACY

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2825

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	Application No. 10/781,249	Applicant(s) BENTLEY ET AL.	
	Examiner Stacy A. Whitmore	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/20/2006</u> | 6) <input type="checkbox"/> Other: _____ |

FINAL ACTION

Claim Objections

1. Claim 48 objected to because of the following informalities: In line 2, the claim language "with to" is grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC§ 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 recites the limitation "the client machine" in 11. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

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F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-52 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 20-52 of copending Application No. 10/780,990. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims provide for methods and computer instructions for designing electronic assemblies and design data and the claims of patent application 10/780,990 provide for designing circuit board design data. The allowance of claims in the present applicant providing coverage for electronic assembly data would also provide patent coverage for circuit board design data.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC§ 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11, 13-28, 30-42, and 44-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perry (US Patent 6,678,877) in view of Kumagai (US Patent 6,496,957)

Note that Kumagai '957 was cited on the IDS dated 12/20/2006.

6. As for the claims, Perry discloses the invention substantially as claimed, including:

1. A method of designing an electronic assembly, the method comprising the steps of: transmitting a user interface that requests entry of electronic assembly design data [abstract; col. 18, lines 20-46, any of figures 10-26], receiving user-supplied electronic assembly design data via the user interface [abstract; col. 18, lines 20-46; figs. 6-7, and 10-26]; retrieving assembly cost data in response receiving to the user-supplied electronic assembly design data from an assembly cost database, the assembly cost data including materials cost [col. 9, lines 4-20, 41-44, 55-61, the data of BOM, size, price, and other ratings are costs of the assembly]; and updating the user interface on the client machine in response to using the assembly cost data [abstract; col. 18, lines 20-46, and col. 9, the user display is updated in accordance with user selections of components and there associated costs];
2. The method of claim 1, wherein transmitting a user interface comprises transmitting the user interface to a client machine via a publicly-accessible global network in response to a user-supplied request received by a server machine via a publicly-

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accessible global network [abstract; col. 18, lines 20-46, the user interface may be on the web, server, client machine, or other machine of choice];

3. The method of claim 1, wherein transmitting a user interface comprises transmitting the user interface application from a server machine to a client machine via the internet [abstract; col. 18, lines 20-46, the user interface may be on the web, server, client machine, or other machine of choice];

4. The method claim 1, wherein transmitting a user interface comprises transmitting an assembly cost database with the user interface from a server machine to a client machine via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

5. The method of claim 1, wherein receiving user-supplied electronic design data comprises receiving user-supplied electronic assembly design data via an input device of a client machine [abstract; col. 18, lines 20-46, the user interface may be on the web, server, client machine, or other machine of choice; figs. 6-7];

6. The method of claim 1, wherein receiving user-supplied electronic design data comprises receiving user-supplied electronic assembly design data via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice; figs. 6-7];

7. The method of claim 1, wherein retrieving assembly cost data comprises retrieving the assembly cost data from an assembly cost database stored on a client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

8. The method of claim 1, wherein retrieving assembly cost data comprises retrieving the assembly cost data, via the publicly-accessible global network, from an assembly cost database stored on a server machine in response to a user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface

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and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

9. The method of claim 1, wherein retrieving assembly cost data comprises retrieving the assembly cost data from a server machine via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

10. The method of claim 1, further comprising retrieving assembly capability data from an assembly capability database in response to the user-supplied electronic assembly design data [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

11. The method of claim further comprising updating the user interface on a client machine based on the assembly capability data [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

13. The method of claim 1, further comprising determining a per-unit assembly cost value based on the assembly cost data [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9 - especially price, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

14. The method of claim 13, wherein determining a per-unit setup cost value and a per-unit run cost value [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9—col. 10—where setup and run costs are component selections (costs of component) and simulations, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

16. The method of claim 13, wherein updating the user interface comprises displaying the per-unit assembly cost value to the user [col. 9, lines 55-61];

19. The method of claim 1, further comprising the steps of:

determining a user selected-portion of the user interface, retrieving an electronic assembly design image based on the user selected-portion, and displaying the electronic assembly design image on a client machine to the user [figs. 16A–20A, col. 15-16 disclose various ways of display on the client machine];

20. A method of designing an electronic assembly, the method comprising the steps of: transmitting a user interface that requests entry of electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, and 10-26, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

receiving user-supplied electronic assembly design data input via the user interface [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

retrieving assembly capability data in response to receiving the user-supplied electronic assembly design data from an assembly capability database [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice], and updating the user interface application on the client machine based on the assembly cost data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

21. The method of claim 20, wherein transmitting a user interface comprises transmitting the user interface to a client machine via a publicly-accessible global network in response to a user-supplied request received by the server machine via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

22. The method of claim 20, wherein transmitting a user interface comprises transmitting the user interface from a server machine to a client machine via the Internet [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

23. The method claim 20, wherein transmitting a user interface comprises transmitting an assembly capability database with the user interface from a server machine to a client machine via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

24. The method of claim 20, wherein receiving user-supplied electronic assembly design data comprises receiving user-supplied electronic assembly design data via an input device of a client machine [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

25. The method of claim 20, wherein receiving user-supplied electronic assembly design data comprises receiving user-supplied electronic assembly design data via a publicly-accessible global network [abstract; col. 18, lines 20-46; col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

26. The method of claim 20, wherein retrieving assembly capability data comprises retrieving assembly capability data from an assembly capability database stored on a client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client

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machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A–20A];

27. The method of claim 20, wherein retrieving assembly capability data comprises retrieving assembly capability data, via a publicly-accessible global network, from an assembly capability database stored on a server machine based on the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A–20A];

28. The method of claim 27, wherein retrieving assembly capability data comprises retrieving the assembly capability data via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A–20A];

30. The method of claim 20, further comprising:

determining a user selected-portion of the user interface, retrieving an electronic assembly design image based on the user selected-portion, and displaying the electronic assembly design image on a client machine to the user [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A–20A also show user selected portions of assembly design data];

31. A method of designing an electronic assembly, the method comprising:

transmitting a user interface from a server machine to a client machine via a publicly-accessible global network, receiving user-supplied electronic assembly design data via the user interface, retrieving assembly cost data in response to the user-supplied

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electronic assembly design data from an assembly cost database, retrieving assembly capability data in response to the user-supplied electronic assembly design data from an assembly capability database, and updating the user interface based on at least one of the assembly cost data and the assembly capability data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

32. The method of claim 31, wherein transmitting a user interface comprises transmitting the user interface to a client machine via a publicly-accessible global network in response to a user-supplied request received by a server machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

33. The method of claim 31, wherein transmitting a user interface comprises transmitting the user interface from a server machine to a client machine via the Internet [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

34. The method claim 31, wherein transmitting a user interface comprises transmitting an assembly cost database and an assembly capability database from a server machine to a client machine via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

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35. The method of claim 31, wherein receiving user-supplied electronic assembly design comprises receiving user-supplied electronic design data via an input device of a client machine [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

36. The method of claim 31, wherein receiving user-supplied electronic assembly design comprises receiving user-supplied electronic design data via an input device of a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

37. The method of claim 31, wherein retrieving assembly cost data comprises retrieving assembly cost data from an assembly cost database stored on a client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

38. The method of claim 31, wherein retrieving assembly cost data comprises retrieving assembly cost data from an assembly cost database stored on a server machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

39. The method of claim 31, wherein retrieving assembly cost data comprises retrieving the assembly cost data from an assembly cost database via a publicly-accessible global

network wherein retrieving assembly capability data includes retrieving assembly capability data from an assembly capability database stored on the client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

40. The method of claim 31, wherein retrieving assembly capability data comprises retrieving assembly from an assembly capability database stored on a client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

41. The method of claim 31, wherein retrieving assembly capability data comprises retrieving assembly from an assembly capability database stored on a server machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

42. The method of claim 31, wherein retrieving assembly capability data comprises retrieving the assembly capability data from an assembly capability database via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

44. The method of claim 31, further composing determining a per-unit assembly cost value based on the assembly cost data [abstract; col. 18, lines 20-46, col. 9 especially

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price, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

45. The method of claim 44, wherein determining a per-unit assembly cost value comprises determining a per-unit setup cost value and a per-unit run cost value [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9-col. 10-where setup and run costs are component selections (costs of component) and simulations, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

47. The method of claim 44, wherein updating the user interface comprises displaying the per-unit assembly cost value to the user [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9 especially price-col. 10-where setup and run costs are component selections (costs of component) and simulations, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

50. An article comprising a computer-readable signal-bearing medium having therein a plurality of instructions which, when executed by a processor, cause the processor to: display a user interface that requests entry of electronic assembly design data to a user, retrieve assembly cost data in response to receiving user-supplied electronic assembly design data from an assembly cost database, retrieve assembly capability data in response to the user-supplied electronic assembly design data from an assembly capability database, and update the user interface based on at least one of the assembly cost data and the assembly capability data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

51. The article of claim 50, wherein the plurality of instructions, when executed by the processor, further cause the processor to retrieve the assembly cost data from the

assembly cost database via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A];

52. The article of claim 50, wherein the plurality of instructions, when executed by the processor, further cause the processor to retrieve the assembly capability data from the assembly capability database via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A-20A].

As for claims 1, 20, 31, and 50, Perry does not specifically disclose that the assembly cost data comprises a processing cost; that assembly capability data indicates the manufacturing capability of an electronic assembly manufacturer.

Kumagai discloses assembly cost data comprises a processing cost; that assembly capability data indicates the manufacturing capability of an electronic assembly manufacturer [col. 23, figs. 2, 4, and 12; col. 31, line 51-col. 33, line 55].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Perry and Kumai because Perry and Kumagai are directed to the design and manufacture of electronic circuitry. Perry is also directed to the design of electronic circuitry (PCB) where the design choices are sent to a manufacturer for assembly of the final designed product [Perry, col. 15, lines 43-53]. Therefore, adding the processing cost to the assembly cost data of Perry, and indicating the manufacturing capability of an electronic assembly manufacturer would improve Perry's system by providing a better understanding to a designer as to the cost of manufacture of a design that is created by the designer, thereby allowing the designer

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to make better design choices before the manufacture of the designed product [see Kumagai col. 21, lines 19-33; col. 33, lines 43-55].

7. As for the claims 15, 17-18, 46, and 48-49, Perry discloses the invention substantially as claimed, including:

Methods, and article comprising computer instructions for designing an electronic assembly as cited above in the rejection under 35 USC 102 (e) to Perry of claims 1-11, 13-14, 16, 19-28, 30-42, 44-45, 47, and 50-52 above and including the per unit setup cost value and per unit run value in response to user-supplied assembly design data as cited above.

Perry does not specifically disclose

15. and 46. wherein determining the per-unit setup cost value and the per-unit run cost value includes determining a per-unit setup cost value and a per-unit run cost value for each work center of an electronic assembly process in response to the user-supplied electronic assembly design data;

17. and 48. determining a tooling cost value in response to and associated with the user-supplied electronic assembly design data;

18. and 49. wherein determining a tooling cost value comprises determining a tooling cost value based on the assembly cost data;

Kumagai discloses determining costs related to user input (design or assembly data) to the work center and tooling costs [col. 23, lines 23-67; such items as per unit cost, equipment cost, which are costs on a per work center basis].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Perry and Kumai because Perry and Kumagai are directed to the design and manufacture of electronic circuitry. Perry is also directed to the design of electronic circuitry (PCB) where the design choices are sent to a

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manufacturer for assembly of the final designed product [Perry, col. 15, lines 43-53]. Therefore, determining the per-unit setup cost value and the per-unit run cost value includes determining a per-unit setup cost value and a per-unit run cost value for each work center of an electronic assembly process, and determining a tooling cost value would improve Perry's system by providing a better understanding to a designer as to the cost of manufacture of a design that is created by the designer, thereby allowing the designer to make better design choices before the manufacture of the designed product [see Kumagai col. 21, lines 19-33; col. 33, lines 43-55].

8. Claims 12, 29, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perry (US Patent 6,678,877) in view of Kumagai (US Patent 6,496,957), and further in view of Vilella (US Patent Application Publication Number 2004/0208354).

9. As for the claims, Perry in view of Kumagai discloses the invention substantially as claimed, including:

Methods, and article comprising computer instructions for designing an electronic assembly as cited above in the rejection under 35 USC 102 (e) to Perry of claims 1-11, 13-14, 16, 19-28, 30-42, 44-45, 47, and 50-52 above and including updating the user interface application on the client machine based on the assembly capability data as cited above.

Perry in view of Kumagai does not specifically disclose displaying a traffic light image to a user.

As for claims 12, 29, and 43, Vilella discloses displaying a traffic light image to a user [abstract, paragraphs 0004-0005, 0025, and 0044].

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Perry in view of Kumagai and Vilella because using a traffic light displayed to a user would provide feedback information to the user such as status and error information so that the user could interactively respond to assembly design to make corrections [see Vilella, paragraphs 0004-0005, 0025, and 0044].

10. Applicant's arguments filed 3/9/2007 with the provisional obvious type double patenting rejection (A) have been fully considered but they are not persuasive.

I. As to argument (A), applicant requests that the rejection be held in abeyance, but does not offer any particular argument as to why the rejection should be withdrawn or held in abeyance, and therefore the rejection of record remains.

11. Applicant's arguments with respect to claims 1-52 with respect to the 35 USC 102 and 35 USC 103 rejections of the prior rejection have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP§706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stacy A. Whitmore whose telephone number is (571) 272-1685. The examiner can normally be reached on Monday-Thursday, alternate Friday 6:30am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stacy A Whitmore/
Primary Examiner
Art Unit 2825

SAW

August 22, 2006